FILE COPY

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, SE, Suite 1152 East, Atlanta, Georgia 30334-9000
Mark Williams, Commissioner
Environmental Protection Division
F. Allen Barnes, Director
Phone: (404) 656-4713
Fax: (404) 651-5778

COASTAL DISTRICT

Reply To:
Coastal District Office
400 Commerce Center Drive
Brunswick, Georgia 31523-8251
(912) 264-7284

December 21, 2010

Mr. Keith Morgan, Executive Director
Brunswick – Glynn County Joint Water & Sewer Commission
700 Gloucester Street, Suite 300
Brunswick, Georgia 31520

RE: **Compliance Evaluation Inspection/ Sanitary Sewer Overflow Inspection**
Brunswick Water Pollution Control Plant
NPDES Permit No. GA0025313
Glynn County

Dear Mr. Morgan:

On December 7 and 9, 2010, the Environmental Protection Division's Coastal District Office, represented by myself, conducted a Compliance Evaluation (CEI) and an initial Sanitary Sewer Overflow (SSO) inspection on the above referenced facility and wastewater collection system. These inspections were conducted to monitor compliance with the Georgia Water Quality Control Act, the Rules and Regulations for Water Quality Control, and the facility's NPDES permit. Mr. Ray Tarker, Sewer Collections Superintendent, and Mr. Mark Ryals, Wastewater Superintendent, represented the Joint Water and Sewer Commission during these inspections.

Please find attached the inspection reports for your review and files. As indicated in both reports, overall maintenance and operation of the facility and wastewater collection system were excellent. The City was aggressively tracking lift station components as well as manhole locations through the GIS system. This technology greatly aided preventive system failures, diverting environmental impacts.

As discussed with Mr. Ryals, the Plant exhibited greatly improved clarity in the clarifiers. He shared that occasional chlorine dosing aided in controlling excessive filamentous algal growth. We also discussed the importance of analyzing organic grit content as a control process, and you are encouraged to continue utilizing that testing.

I greatly appreciate the time Mr. Tarker, Mr. Matock, Mr. Henderson, Mr. Lang and Mr. Ryals set aside to accomplish these inspections. Should you have any questions or concerns, please contact me at (912) 264-7284.

Sincerely,

Gary Reynolds
Environmental Specialist
Coastal District Office

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cc: CD, WQ Files

FACILITY RECONNAISSANCE

Name of Facility: **City of Brunswick-Academy Creek WPCP** Date: **December 9, 2010**

Permit No: **GA0025313** Responsible Official: **Keith Morgan, Executive Director, Glynn County Joint Water & Sewer Commission**

Permitted Flow: **16.9** Inspected By: **Gary Reynolds, EPD, CD South**

GENERAL CONDITIONS:

	YES	NO	N/A
Excessive scum, grease, foam or floating sludge in clarifiers.	☐	☒	☐
Noxious odors (give location)	☐	☒	☐
Severe corrosion of structures/equipment-Grit chamber	☐	☒	☐
Chemical, wastewater or sludge spills	☐	☒	☐
Vital equipment out of service	☐	☒	☐
Excessive noise (give location)	☐	☒	☐
Unusual or improvised equipment **vacumn truck utilized to remove scum pass-through at bar screen**	☒	☐	☐
Overflowing of influent lines, overflow weirs or other structures	☐	☒	☐
Overflows at alternate discharge points, bypass, or any unpermitted discharges (give location):	☐	☒	☐
Pipes from process/storage areas that exhibit evidence of discharge to the ground or to surface water.	☐	☒	☐

PRELIMINARY TREATMENT:

Odors in preliminary treatment area	☐	☒	☐
Excessive debris on bar screen	☐	☒	☐
Grit chamber clogged	☐	☒	☐
Grit and screenings improperly contained	☐	☒	☐
Excessive organic content to grit	☐	☒	☐
Any preliminary treatment equipment out of service:	☐	☒	☐

	YES	NO	N/A
ACTIVATED SLUDGE TANKS:			
Dead spots, dark foam or bad order	☐	☒	☐
Surface aerator or compressor failure	☐	☒	☐
Blower/aerator on timer Interval **Continuous**	☐	☒	☐
Air rising in clumps (boiling)	☐	☒	☐
Leaks in compressed air piping	☐	☒	☐
Dark mixed liquor or dark tan foam	☐	☒	☐
Thick billows of white, sudsy foam	☐	☒	☐
Low dissolved Oxygen (<1 mg/L) Actual D.O. _____	☐	☒	☐
MLSS concentration _____ Excessive or low	☐	☒	☐
SECONDARY CLARIFIER:			
Excessive gas bubbles on surface	☐	☒	☐
Overflow weirs fouled or not level	☐	☒	☐
Short circuiting of flow	☐	☒	☐
Buildup of solids in center well of Circular clarifier	☐	☒	☐
Pin floc in overflow	☐	☒	☐
Scum rake ineffective or overloaded	☐	☒	☐
Sludge floating on surface, clumping	☐	☒	☐
Billowing sludge or sludge blanket too high. Depth **1-2'**	☐	☒	☐
Sludge withdrawal ports clogged	☐	☒	☐
Evidence of solids washout	☐	☒	☐
Sludge judge not available	☐	☒	☐

	YES	NO	N/A
CHLORINATION:			
Excessive gas bubbles on surface	☐	☒	☐
Sludge buildup in contact chamber	☐	☒	☐
Short circuiting of flow	☐	☒	☐
Inadequate detention time	☐	☒	☐
Foaming at outfall or downstream	☐	☒	☐
Floating scum and/or solids in chamber	☐	☒	☐
Chlorine feed rate **100-200#/day** Flow proportioned? **Yes**	☒	☐	☐
(0.1 ppm total residual chlorine) Chlorine tank empty or nearly so	☐	☒	☐
Feed equipment non-operational	☐	☒	☐
GENERAL SLUDGE HANDLING:			
Inadequate sludge removal from clarifiers or thickeners	☐	☒	☐
Thickened sludge too thin	☐	☒	☐
Gravity thickener weirs fouled	☐	☐	☒
Sludge pumps out of service	☐	☒	☐
AEROBIC DIGESTER:			
Excessive foaming or bad odor	☐	☒	☐
Clogging of diffusers	☐	☒	☐
Mechanical aerator failure	☐	☒	☐
Insufficient D.O. in digester. Actual D.O. **6.0 ppm**	☐	☒	☐

SLUDGE DEWATERING

How many drying beds? **None in use (Incinerator; Soil amendment product)**

	YES	NO	N/A
Poor sludge distribution on drying beds	☐	☐	☒
Sludge applied to already full bed	☐	☐	☒
Vegetation in drying beds	☐	☐	☒
Dry sludge remaining in drying beds	☐	☐	☒
Sludge runoff from plant site	☐	☐	☒
Mechanical dewatering system failure	☐	☐	☒
Spilled sludge around dewatering units	☐	☐	☒
Sludge stockpiled on plant grounds	☐	☐	☒

FLOW MEASUREMENT:

(Type of Primary device **5' rectangular weir**)

Broken, cracked, clogged primary device	☐	☒	☐
Stilling well clogged or broken	☐	☐	☒
Weir crest corroded, damaged, not level or not sharp-edged (<1/8")	☐	☒	☐
Sizing of system not appropriate for flow range	☐	☒	☐
Influent flow not measured before all return lines	☐	☒	☐
Effluent flow not measured after all return lines	☐	☒	☐
Flow meter accurate to within 10% of primary device:	☒	☐	☐

Meter reading **3.0 MGD**

Primary device head: **(.42 head =2.9 MGD)** flow:

PLANT EFFLUENT:

Outfall inaccessible:	☐	☒	☐
Excessive solids, turbidity, foam, grease, scum, color or macroscopic particulate matter	☐	☒	☐

	YES	NO	N/A
CHEMICAL TREATMENT EQUIPMENT:			
Heavy corrosion evident	☐	☒	☐
Chemicals left in open atmosphere	☐	☒	☐
Chemical containers stored improperly or hazardously	☐	☒	☐
Dry chemicals spilled between storage area and feed units	☐	☒	☐
Empty chemical containers improperly disposed of	☐	☒	☐
Liquid chemical feed units not appropriately contained (berms/dikes)	☐	☒	☐
Chemical dust covering feed unit area, storage or transfer areas	☐	☒	☐
Ruptures in chemical feed line	☐	☒	☐
RECEIVING STREAM:			
Downstream appearance significantly altered by effluent (color, turbidity, etc.) describe:	☐	☒	☐
Sludge accumulation in streambed or along bank	☐	☒	☐
Drop in D.O. downstream, below stream standard **N/E**	☐	☒	☐
Noxious odors downstream of outfall	☐	☒	☐
Evidence of toxicity (dead fish even though apparently adequate D.O., dead or impaired plants, etc.)	☐	☒	☐
SAFETY:			
The following safety equipment is available:			
a. Fire extinguishers	☒	☐	☐
b. First-aid kits	☒	☐	☐
c. Self-contained breathing units or canister masks	☒	☐	☐
d. Chlorine repair kit	☒	☐	☐
e. Chlorine gas detectors	☒	☐	☐
f. Safety signs, painted highlights, other warnings	☒	☐	☐

	YES	NO	N/A
PLANT GROUNDS:			
The grounds are poorly kept, i.e. grass needs cutting	☐	☒	☐
Buildings, equipment, etc. need painting	☐	☒	☐
The all weather roads are potholed or otherwise in disrepair	☐	☒	☐

COMMENTS: **Only four of six clarifiers were in use (other two on stand-by). The City continued weekly vacuuming of solids pass-through at the influent bar screen. Macro-solids were not observed entering the Academy Creek tributary from the chlorine contact chamber.**

Georgia Department of Natural Resources
COASTAL DISTRICT OFFICE
400 Commerce Center Drive, Brunswick, Georgia 31523-8251
Mark Williams, Commissioner
Environmental Protection Division
F. Allen Barnes, Director
912-264-7284

WPCP O&M/COMPLIANCE EVALUATION

Date of Inspection: **December 9, 2010**

Name of Facility: **Brunswick WPCP**

Address of Facility: **2909 Newcastle Street**

City: **Brunswick** State: **GA** Zip: **31520** County: **Glynn**

Is copy of current permit at facility? ☒ Yes ☐ No

Permit expiration date: **8/5/2012** Permit No: **GA0025313**

Type of Treatment Facility: **Activated Sludge** Design Flow (MGD) **16.9**

Responsible Official: **Keith Morgan** Title: **Executive Director, Glynn County Joint Water & Sewer Commission**

Facility Representative: **Mark Ryals** Title: **Wastewater Superintendent**

Inspected By: **Gary Reynolds** Agency: **EPD, Coastal District**

The Facility meets all requirements of the permit: ☒ Yes ☐ No
(If No, see evaluation rating below for area of deficiency).

All Facility operational and laboratory personnel meet the certification requirements of the State Board of Examiner's Rules of Georgia for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts: ☒ Yes ☐ No

Evaluation Rating of permit Requirements:
(S=Satisfactory) (U=Unsatisfactory) (N/E=Not Evaluated) (M=Marginal)

		Rating
A.	Permit Monitoring and Reporting	S
B.	Staffing	S
C.	Operation	S
D.	Maintenance	S
E.	Collection System	S
F.	Sludge Disposal	S

NUMBERS IN LEFT MARGIN REFER TO CORRESPONDING SECTION IN PERMIT.

A. Permit Sampling, Monitoring and Reporting:

(I.B.)

1. Self-monitoring data reported by the facility for the previous 12 months documents compliance with (if noncompliant, list instances in comments):
   a. Permitted effluent limitations **Yes**
   b. Monitoring Requirements of permit **Yes**
   c. Submission of Reports required by permit **Yes**
   d. Compliance schedules under permit or orders. **N/A**
   e. If noncompliance in a-d, list EPD enforcement status. **N/A**

(I.C.4)

2. Facility personnel record the following for samples collected as required by the permit:
   a. sampling date: Yes ☒ No ☐
   b. sampling time: Yes ☒ No ☐
   c. name or initials of person(s) collecting samples Yes ☒ No ☐
   d. sample volume: Yes ☒ No ☐
   e. sampling location: Yes ☒ No ☐

(I.B.)

3. Samples are taken at sites specified in permit. Yes ☒ No ☐

(I.C.1.)

4. Locations are adequate for representative samples. Yes ☒ No ☐

(I.B.)

5. Sampling and analysis completed on parameters specified by permit. Yes ☒ No ☐

(I.B.)

6. Sampling and analysis done at the frequency specified by permit. Yes ☒ No ☐

(I.C.3.)

7. Sample collection procedures comply with permit requirements. Yes ☒ No ☐
   a. Samples refrigerated during composting (4°C)? Yes ☒ No ☐
   b. Is temperature logged daily? Yes ☒ No ☐
   c. Proper preservation techniques used? Yes ☒ No ☐
   d. Containers and sample holding times before analyses conform with 40 CFR 136.3. (I.C.3.) Yes ☒ No ☐

8. Do analytical procedures appear to comply with permit and 40 CFR 136 I.C.6 requirements?
   a. Are calibration records maintained for all lab instruments, including flow meters, used to monitor or analyze permit required parameters: Yes ☒ No ☐ N/A ☐

b. Are temperature logs maintained for all incubators, ovens, automatic samplers, refrigerators, etc.? Yes ☒ No ☐ N/A ☐

c. Are the proper temperature ranges maintained for the following:
   1. BOD_5 ($20^\circ C \pm 1^\circ C$) Yes ☒ No ☐ N/A ☐
   2. Fecal Coliform ($44.5 \pm .2^\circ C$) Yes ☒ No ☐ N/A ☐
   3. TSS 103 - $105^\circ C$ Yes ☒ No ☐ N/A ☐
   4. Sample refrigerator ($4 - 10^\circ C$) Yes ☒ No ☐ N/A ☐

d. All chemical and reagents used within expiration dates? Yes ☒ No ☐ N/A ☐

e. Does pH measurements include sample and buffer temperature? Yes ☒ No ☐ N/A ☐
   Are they recorded? Yes ☒ No ☐ N/A ☐

f. pH meter calibrated against 2 standard buffers that bracket sample pH. Yes ☒ No ☐ N/A ☐

g. Is pH meter adjusted to sample/buffer temperature? Yes ☒ No ☐ N/A ☐

h. In the BOD_5 analyses, are the only results reported based on dilutions within the D.O. depletion criteria ($\geq$2.0 mg/1 D.O. drop and $\geq$1.0 mg/1 D.O. remaining) except where high quality effluent do not produce a $\geq$2.0 mg/2 drop. Yes ☒ No ☐ N/A ☐

i. At least 2 sample dilutions prepared for BOD_5 analysis. Yes ☒ No ☐ N/A ☐

j. Are chlorinated samples for BOD_5 dechlorinated and seeded? Yes ☒ No ☐ N/A ☐

k. In TSS analyses, are residue weights at least 1.0 mg. Yes ☒ No ☐ N/A ☐

l. At least 3 dilutions prepared for fecal coliform analysis. Yes ☒ No ☐ N/A ☐

m. Standard curves prepared, used, and updated for parameters where applicable. Yes ☒ No ☐ N/A ☐

9. Are the following quality control measures employed and records maintained?

a. Duplicate tests performed on approximately 10% of samples. Yes ☒ No ☐ N/A ☐

b. Reference standards analyzed on a periodical frequency. Yes ☒ No ☐ N/A ☐

c. Class "S" weights used to check calibration of analytical balance. Yes ☒ No ☐ N/A ☐

d. Value of standardized reagents periodically checked? Yes ☒ No ☐ N/A ☐

e. Air calibration of D.O. meter periodically checked against a Winkler titration? Yes ☒ No ☐ N/A ☐

f. Are sample blanks analyzed where applicable? Yes ☒ No ☐ N/A

COMMENTS: _____

(I.C.4.)

10. Facility personnel record the following laboratory information on the laboratory bench sheet (work sheet, or a reference document.)

a. analyses date	Yes ☒ No ☐
b. analyses time	Yes ☒ No ☐
c. analytical method	Yes ☒ No ☐
d. all calculations and results	Yes ☒ No ☐
e. name or initials of analyst	Yes ☒ No ☐

(I.C.6.)

11. Monitoring records and original strip chart recording of flow, pH, DO, or other parameters which are continuously monitored are maintained for a minimum of three years except sludge records which are maintained for at least five years. Yes ☒ No ☐

(I.C.5.)

12. Laboratory and DMR data review:

a. Are the DMRs routinely signed by the responsible official? Yes ☒ No ☐

b. Are the "Quantity or Loading" columns on the DMRs filled in with data in kg/day? Yes ☒ No ☐

c. Is fecal coliform bacteria data reported as geometric means? Yes ☒ No ☐

d. Are the "frequency of analysis" and "type sample" columns filled in? Yes ☒ No ☐

e. Are maximum values reported maximum weekly averages for BOD, TSS, and other applicable parameters? Yes ☒ No ☐

f. On the 2.1 or 2.2 form, is data recorded corresponding to the dates the samples were collected instead of the dates the tests were performed? Yes ☒ No ☐

g. Do the 2.1 or 2.2 forms indicate that all tests, including pH, D.O., and TRC tests, are performed at the required frequencies? Yes ☒ No ☐

h. Are all laboratory results relative to permit required parameters included in calculation of DMR reported values. Yes ☒ No ☐

COMMENTS: _____

B. Staffing and Training:

(II.A.5.)

1. Sufficient staff provided to insure all tasks associated with the operation, maintenance, monitoring, and reporting requirements are performed as needed and consistent compliance with permit requirements achieved. Yes X No ☐

(I.C.6.e.)

2. Records maintained on operator certification.
   Staffing evaluation form completed. Yes ☒ No ☐

   a. staff name **Mark Ryals**
   b. certification number **WW1-014424; WWL013783**
   c. license current (expiration date) **6/30/2011**
   d. date of certification **6/30/2007 (issuance date)**

(II.A.5.)

3. The person in responsible charge of the operation of the wastewater treatment facility holds a wastewater certificate equal to or higher than the class of the facility, in accordance with the "Rules of Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts." Yes ☒ No ☐

(II.A.5, II.A.6.)

4. Operators and laboratory analysts, other than the person in responsible charge, have obtained minimum certification in accordance with the "Rules of Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts." Yes ☒ No ☐

COMMENTS: **The Plant has two Class I wastewater operators, a Class II wastewater operator, and six (6) Class III wastewater operators, trending towards Class II wastewater certification.**

C. Plant Operations:

1. Standby power or other equivalent provision provided for critical plant components. Yes ☒ No ☐ Specify type of standby power system **The Plant has 1 portable diesel generator, and 2 permanent generators, run weekly to assure their functions.**

2. Adequate alarm system for power or equipment failures available. Yes ☒ No ☐
Specify location of system for critical plant components: **SCADA at headworks, and GIS/telemetry at all lift stations.**

3. Sharp increases or decreases in flow, hydraulic and or organic overloads are experienced. Explain (frequency, magnitude, cause) **No. Corrections in collection system and manhole components have reduced I/I to less drastic increase under heavy rainfall conditions.**

(II.A.7.)

4. The facility bypassed since the last inspection. Yes ☐ No ☒
If yes, describe. **N/A**

5. (Checklist) evaluation of unit processes. Yes ☒ No ☐ N/A☐

6. Attach schematic of unit processes and flow. Yes ☐ No ☒ N/A☐

7. The facility has instituted a written or documented process control program, which includes sufficient in-plant testing so that data is representative of actual conditions.
Yes ☒ No ☐ N/A☐

8. List Process control parameters routinely analyzed:

Parameter	Frequency of Analyses	Range of Results	
a. **D.O.**	**Daily**	**1.0**	**4.8**
b. **SVI**	**Daily**	**75**	**125**
c. **Sludge blanket**	**Daily**	**1'**	**2'**
d. **SRT**	**Daily**	**8**	**11**
e. **Food/mass ratio**	**Daily**	**.2**	**.4**

Are trend charts used? **Yes** For which parameters? **Q,BOD/TSS,FTM/SVI/OXYGEN**

9. Describe process control strategy employed by use of these analyses. **Sludge wasting, SBR adjustments**

COMMENTS: _____

(I.A.4.f)

D. Plant Maintenance:

1. A written routine preventive maintenance program in place which includes:

   a. lubrication schedules — Yes ☒ No ☐
   b. inspections — Yes ☒ No ☐
   c. replacement of parts — Yes ☒ No ☐
   d. tools or equipment needed — Yes ☒ No ☐

2. Briefly describe how the scheduled maintenance is tracked, and specific tasks are triggered. Is the program computerized? **A computerized maintenance, spare parts inventory, is maintained. Crews conduct field inspections, and record in writing maintenance, field observations, and the data is transmitted into a computer database.**

3. An equipment record and/or maintenance log maintained for each piece of equipment which includes:

   a. record of maintenance performed — Yes ☒ No ☐
   b. persons performing maintenance — Yes ☒ No ☐
   c. date maintenance performed — Yes ☒ No ☐
   d. major repairs and maintenance — Yes ☒ No ☐
   e. associated costs or repairs — Yes ☒ No ☐

4. A spare parts inventory is maintained. Yes ☒ No ☐
5. A spare parts list is kept, and a system is in place to reorder spare parts as they are used. Yes ☒ No ☐

6. The appropriate tools and equipment necessary for performing maintenance tasks are provided. Yes ☒ No ☐

7. Manufacturer's literature for all treatment units is available to plant personnel. Yes ☒ No ☐

COMMENTS: **The City has a detailed tracking for spare parts inventory and maintenance schedules.**

E. Collection System (If system has more than four lift stations, it is recommended that a full, separate technical evaluation of the system be performed).

1. A sewer use ordinance has been enacted by the municipality and enforced to protect the collection system and wastewater treatment facility. Copies of the ordinance should be available at the facility and the City Hall. Describe who is responsible for enforcing the ordinance requirements and how it is done: **A Sewer Use Ordinance is enforced through the pretreatment program, including FOG components.**

2. Accurate maps and plans of the collection system maintained and updated as new sewer lines and lift stations are added to the system. Yes ☒ No ☐
3. The right-of-way for major interceptor sewer lines maintained and physically inspected once per year as a minimum to identify correctable sources of inflow and breaks in the line. Specify inspection frequency. **Constant surveillance.**
4. Records of inspection and maintenance of the lift stations maintained and up-to-date. Yes ☒ No ☐
5. A written routine inspection and maintenance program for he collection system has been established. Yes ☒ No ☐
6. A list of spare parts for the lift stations has been developed and an inventory of parts maintained to insure continuous operation and prevent overflows. Yes ☒ No ☐
7. All lift stations are in service and properly operated and maintained. Yes ☒ No ☐
8. The manufacturer's literature on all lift station equipment available to personnel. Yes ☒ No ☐
9. An adequate alarm system and written emergency procedures for prompt response to lift station failures provided. **All stations are equipped with visual/audible alarm, and most have a telemetry and GIS system.** Yes ☒ No ☐
10. Plans and specifications for new sewer lines and lift stations submitted to the Georgia Environmental Protection Division for approval prior to construction or installation. Yes ☒ No ☐

LIFT STATION INVENTORY (add pages if necessary)

Station Name or Location	COMMENTS
A SSO Inspetion was conducted including these stations:	
Lift Station No. 32	**Under rehabilitation. Located at Bay Street**
Golden Isles Parkway Lift Station	**Flyght pumps, dual 10 hp.**

COMMENTS: **The City has 82 lift stations. The SSO documented several of their manholes are being refurbished by fiberglass relining.**

F. Sludge Disposal:

(I.A.3.)
1. The facility maintains records to document solids generation and removal. Yes☒No☐N/A☐

(I.A.3.)
2. Sludge disposal procedures have been developed to insure adequate year-round sludge disposal. Yes ☒ No ☐ N/A☐
3. The method for ultimate sludge disposal does not adversely affect the environment such as:
   a. creating offensive odors Yes ☒ No ☐ N/A☐

b.contaminating surface waters or groundwater Yes ☒ No ☐ N/A☐
c.creating a health hazard Yes ☒ No ☐ N/A☐

4.Describe method of sludge disposal: **Belt press sludge is incinerated, then rendered *inert*, wherein it is mixed as a soil amendment compost. The City generates an annual Bio-solids report.**

(I.A.2.)

5. If land application is utilized for sludge disposal, a sludge management plan has been developed as required by the permit (If yes, include year EPD approved the plan or most recent amendment).

Yes ☐ No ☐ N/A ☒ _____

(I.A.3.)

6. The quantity of solids removed from the plant is equal to the solids generated on an average daily basis: Check if N/A☐ **(*Not Evaluated**

a. Plant Data (average for _____ to _____)

Flow (Q) _____ (MGD)
Influent BOD_5 (IB) _____ (mg/1)
Effluent BOD_5 (OB) _____ (mg/1)
Effluent TSS (ES) _____ (mg/1)
Y.C. (YIELD COEFFICIENT) *
Process (include primary clarifier if necessary)

_____ _____ _____

*(multiply together as many as apply)

b. 1. Expected sludge production = (Q) (IB-OB) (YC) (8.34) = _____ lb/day

2. Accounted for sludge:

a. Intentionally wasted sludge _____ lb/day
(from facility sludge records)

b. Effluent solids: (Q x ES x 8.34) _____ lb/day

3. Unaccounted for sludge: _____ lb/day
(1.) – (2a + 2b)

Refer to pp. 35 and 43 of EPA Handbook for Improving POTW Performance Using the Composite Correction Program Approach, pp. 32, 35, or plant data if available.

COMMENTS:

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **1** of **6**
Date : **12/9/10**
Weather: **Sunny, cool**
Direction Facing **NW** Time **1:10 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Lift station No. 32 being rehabilitated.
Other
Located on Bay Street. EPD SSO/ CEI inspections.

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **2** of **6**
Date: **12/9/10**
Weather : **Sunny, cool**
Direction Facing **E** Time **1:50 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Golden Isles Parkway lift station.

Other
Located end of Spur 25. Generator on site, dual Flyght pumps (10 hp each; as growth occurs, will replace with 40 hp pumps). EPD SSO/CEI inspections.

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **3** of **6**
Date : **12/9/10**
Weather: **Sunny, cool**
Direction Facing **W** Time **1:10 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Manhole scheduled for refurbishment. Note brick/cement deterioration.
Other
Located on 2nd/Gordon Street. EPD SSO/ CEI inspections.

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **4** of **6**
Date: **12/9/10**
Weather : **Sunny, cool**
Direction Facing **NE** Time **1:15 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Manhole relined, white build-up of sulfur. 10 year warranty.

Other
Located on Community Road in front of Palm Place 3421. EPD SSO/CEI inspections.

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **5** of **6**
Date : **12/9/10**
Weather: **Sunny, cool**
Direction Facing **S** Time **1:30 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Aerial sewer pipe crossover.
Other
Located on Stafford Avenue. Note: adequate cement supports. No evidence of leaks nor impingement of stream debris. EPD SSO/ CEI inspections.

County Name : **Glynn**
Site Name : **City of Brunswick WPCP**
Picture No. **6** of **6**
Date: **12/9/10**
Weather : **Sunny, cool**
Direction Facing **W** Time **1:40 p.m.**
Photographer : **G. Reynolds, EPD**
Program : **WQ**
Explanation
Small sewer pipe aerial crossover.

Other
Located on Indigo Street. Note: (hidden) cement supports on both ends. No stream debris pressure. EPD SSO/CEI inspections.

CONTACT, PERMIT, AND SYSTEM CHARACTERIZATION INFORMATION

CONTACT INFORMATION

ACADEMY CREEK WPCP FACILITY NAME	2909 NEWCASTLE STREET FACILITY ADDRESS	GA0025313 NPDES PERMIT NO.
MARK C. RYALS CONTACT NAME	Superintendent CONTACT TITLE	Aug 6 2007 DATE OF ISSUANCE
912-261-7146 PHONE NUMBER	912-261-7172 FAX NUMBER	Aug 12, 2012 DATE OF EXPIRATION

PERMIT INFORMATION

	YES	NO	N/A	Source*
What facilities does the permit cover? WWTP and wastewater collection system	X			I
Does the permit authorize wet weather bypasses?		X		I
What is the maximum permitted flow rate for the treatment plant?	13.5 MGD			
Is the facility under any administrative or judicial order?		X		I

SYSTEM CHARACTERIZATION

Are partially treated effluents combined with fully treated flows prior to discharge? (Blend)	~~X~~	X		I
Length of pipeline in the collection system (all non-lateral lines):	60 miles			
Number of pump stations in the system:	0			
Number of constructed overflows prior to the WWTP:				
Are portions of the interceptors or other lines known or believed to be hydraulically overloaded or undersized?		X		
Are there locations known to experience basement flooding or other similar problems?				
What information is available on maps kept on-site by the permittee:				
all major interceptors and trunk sewers with pipe size and direction of flow	X			I
laterals	X			I
pump stations	X			I
diversion chambers	X			I
flow meters				
rain gauge stations				
control structures (regulators, diversion structures, weirs, valves)	X			I
water quality monitoring sites	X			I
receiving streams	X			I
locations of telemetering devices	X			I
treatment plant location	X			I
How many municipalities discharge to the collection system?	12,000			
What treatment capacity is available at the WWTP?				
design primary treatment capacity	16.9 MGD			
design secondary treatment capacity	13.5 MGD			
peak flow primary treatment capacity	16.9 MGD			
peak flow secondary treatment capacity	13.5 MGD			
Which parts of the collection system are owned by the permittee?				
all	X			I
pump stations	X			I
diversion chambers	X			I
sewer pipes (other than private laterals)	X			I

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
Which parts of the collection system are operated by the permittee?				
all	X			I
pump stations	X			I
diversion chambers	X			I
sewer pipes (other than private laterals)	X			
Does the permittee have legal agreements with other parties that required those parties to perform tasks required by the NPDES permit?	X			I

I. PROPER OPERATION AND MAINTENANCE

A. General

Does the permittee have an O&M plan for the wastewater collection system?	X			I
If so, is that plan approved or required by the permitting authority?	X			I
Does the permittee have a copy of the documentation required under the O&M plan?	X			I
Does the permittee have a process for periodically revising the O&M plan?	X			I
Does the O&M plan specify that some activities be performed by a separate legal entity?	X			I
If so, does the permittee have documentation that those activities are being performed?	X			I

B. Inspections

Does the permittee inspect known SSO locations?	X			I
How frequently are the known SSOs inspected? (e.g., each rain event, complaint, rain over .5 inch)	RAIN EVENT			
How frequently are pump stations inspected?	DAILY			
Does the permittee have documentation of SSO inspections?	X			I
Does the permittee have documentation of the pump station inspections?	X			I
Does the permittee have records of collapsed and/or blocked sewers?	X			I
Does the permittee conduct CCTV inspections of the collection System?	X			
If so, how many miles of sewer lines are inspected with CCTV annually?				Miles
How many equivalent full time staff are dedicated to inspections?	4 FTS			

If not, how are collection system equipment malfunctions or other deficiencies identified?

DAILY INSPECTION BY CREW AND CCTV INSPECTION

Will the CCTV inspections eventually reach all major (i.e. non-lateral) lines in the system?	X			I

C. Cleaning and Maintenance

Does the permittee have a schedule for cleaning the sewer lines?	X			I

How are cleaning frequencies for the sewer lines determined?

CCTV INSPECTIONS AND SSO

Does the permittee have procedures for reducing solids deposition in the system?	X			I
Does the permittee document sewer cleaning that has been performed?	X			
If so, does the documentation in any way differ from the permittee's schedule for cleaning?		X		I
Does the permittee exercise regulators according to a schedule?	X			I
Are any regulators not functioning (e.g. rusted in place)?	X			I

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
What is the procedure for documenting and correcting collection system deficiencies? City Works Maintenance Program				
How many complaints (re: basement backups, other discharges)) are received annually?				
How are complaints addressed? Service Request Call In Procedurces.				
Is a computerized maintenance program used to track work orders? If so, is it used for:				
the WWTP?	X			I
the pump stations	X			I
the collection system, apart from the pump stations?	X			I
Does the permittee have the following records?				
cleaning logs	X			
citizen complaints				
work orders				
video tape of CCTV inspections	X			I
maps of problem areas	X			I
emergency response plan	X			I
training manuals	X			I
Does the permittee have a grease control program?	X			I
Does the permittee have a root control program?				
Do the maintenance records indicate recurring problems which the program does not seem to be effective in reducing?				
		X		I

If so, describe:

How many full time equivalent staff are dedicated to sewer cleaning and maintenance? 4 / 2 crew

What spare parts for pump stations are kept in the inventory? over 500 line items and 75% is used for Pump station and WWTP Head Works.

D. Operation of the Collection System

How many pump stations have a backup power supply? How many of these have:	9
dual feed?	7
on-site generator?	2
off-site portable generator	0
How many pump stations have backup pumping capacity if the largest pump goes down?	9
How many times has a pump failure (or inadequate pumping capacity) resulted in a SSO?	0

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
How many pump stations have permanent flow meters?				Ø
How many pump stations are monitored remotely? 60 ON HAND 50 Remotely				50
What is the annual operating budget for the collection system? $917,000				$917,000
How many miles are operated within the budget?				50 miles

What type of training does the permittee provide to collection system personnel?

collection personnel. 2 personnel are certified in compliance with Georgia State Board. 4 personnel in training to be certified.

Does the permittee have procedures for regulating diversion and bypass valves?	X			I

If so, describe: See ART II Section A (8) BYPASSING

What flow rate can the WWTP receive before additional flow adversely affects the WWTP treatment process 13.5 MGD

Does the permittee do a pre-storm drawdown of the WWTP wet well and interceptors to add additional wet weather capacity?		X		I

Which, if any, of the following does the permittee use for storage of untreated sewage?

abandoned pipelines				
catch basin storage tanks				
earthen basins				
first flush tanks				
in-receiving water flow balance				
in-sewer storage (e.g. raising weirs, regulator adjustment)				
lagoons				
open concrete retention tanks				
closed concrete retention tanks	X			I
storage tunnels and conduits				

Which, if any, of the following does the permittee use to reduce storm water inflow:

area drain, foundation drains, and roof leader disconnection				
basement sump pump redirection				
flow restrictions and catch basin inlet modification				
grassed swales and infiltration trenches				
infiltration basins				
on-street surface storage				
porous pavements				I
storm water detention basins	X			
storm water infiltration sumps				

Does the permittee have programs for reducing I/I ?	X			I
Does the permittee have a pretreatment program?	X			I

What percentage of flow to the POTW is non-domestic? 32% %

Has the permittee identified industrial users whose discharge could reach SSOs?	X			I
If so, does the permittee have documentation of this evaluation?	X			I

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
Has the permittee modified its pretreatment program to reduce IU discharge to SSOs?	X			I
If so, do the modifications				
prohibit batch discharges during wet weather?		X		I
require detention of industrial discharge during wet weather?		X		I
other:				
Does the permittee have a process for periodic review of the pretreatment program?	X			I
Is the maximum wet-weather WWTP capacity reached during wet weather events?		X		I
If a bypass is used, does the permittee monitor bypass flow rates?	X			I
Are other treatment units available for use during a storm event?	X			I
Has the permittee determined the hydraulic capacity of each pump station?	X			I
Has the permittee determined the hydraulic capacity of each influent sewer?	X			I
Is pump station capacity smaller than interceptor capacity in any portions of the system?			X	

What other bottlenecks, if any, has the permittee identified in the collection system?

Has the permittee upgraded any pump stations to increase capacity? | | X | | I

Has the permittee identified any process limitations at the WWTP? If so, what are they?

NO

How does the permittee become aware of SSOs?

we have on hand supervisory control and Data Acquistion system on 50 of 60 Pump Stations.

What are the most common causes of SSOs?

Power Failures

What steps has the permittee taken to prevent SSOs at problem locations?

① training of CREW'S.
② Cleaning of Line more often
③ Conduct Inspection, Daily, weekly
④ Apply the Function of A MANAGER - PLAN, control, Direct, Organize, Staff

*(P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

WASTEWATER COLLECTION SYSTEM INSPECTION 1 OF 6

CONTACT, PERMIT, AND SYSTEM CHARACTERIZATION INFORMATION

CONTACT INFORMATION

ACADEMY CREEK FACILITY NAME	2909 NEWCASTLE ST. FACILITY ADDRESS BRUNSWICK, GA 31520	GA 0025313 NPDES PERMIT NO.
R.E. TARKEL JR. CONTACT NAME	SUPT. SP&M DIVISION CONTACT TITLE	DATE OF ISSUANCE
912-261-7152 PHONE NUMBER	FAX NUMBER	DATE OF EXPIRATION

PERMIT INFORMATION

	YES	NO	N/A	Source*
What facilities does the permit cover? WWTP and wastewater collection system				
Does the permit authorize wet weather bypasses?				
What is the maximum permitted flow rate for the treatment plant?				_____ MGD
Is the facility under any administrative or judicial order?				

SYSTEM CHARACTERIZATION

Are partially treated effluents combined with fully treated flows prior to discharge? (Blend)	
Length of pipeline in the collection system (all non-lateral lines):	± 200 miles
Number of pump stations in the system:	PUBLIC: 82 PRIVATE = 55
Number of constructed overflows prior to the WWTP:	UNK.
Are portions of the interceptors or other lines known or believed to be hydraulically overloaded or undersized?	X
Are there locations known to experience basement flooding or other similar problems?	X (DURING MAJOR RAIN EVENT)

What information is available on maps kept on-site by the permittee:

all major interceptors and trunk sewers with pipe size and direction of flow	X		
laterals	X	[redacted]	
pump stations	X		
diversion chambers			X
flow meters	X		
rain gauge stations	X		
control structures (regulators, diversion structures, weirs, valves)			X
water quality monitoring sites			X
receiving streams	X		
locations of telemetering devices			X
treatment plant location	X		

How many municipalities discharge to the collection system? NONE

What treatment capacity is available at the WWTP?

design primary treatment capacity	_____ MGD
design secondary treatment capacity	_____ MGD
peak flow primary treatment capacity	_____ MGD
peak flow secondary treatment capacity	_____ MGD

Which parts of the collection system are owned by the permittee?

all		X	
pump stations	X	(PUBLIC)	
diversion chambers			X
sewer pipes (other than private laterals)	X		

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
Which parts of the collection system are operated by the permittee?				
all		X		
pump stations	X	(PUBLIC)		
diversion chambers			X	
sewer pipes (other than private laterals)	X			
Does the permittee have legal agreements with other parties that required those parties to perform tasks required by the NPDES permit?		X		(INDUSTRIAL PRETREATMENT AND UNITED WATER)

I. PROPER OPERATION AND MAINTENANCE

	YES	NO	N/A	Source*
A. General				
Does the permittee have an O&M plan for the wastewater collection system?		X		(IN DEVELOPMENT)
If so, is that plan approved or required by the permitting authority?		X		
Does the permittee have a copy of the documentation required under the O&M plan?		X		(IN DEVELOPMENT)
Does the permittee have a process for periodically revising the O&M plan?		X		(IN DEVELOPMENT)
Does the O&M plan specify that some activities be performed by a separate legal entity?	X			(UNITED WATER)
If so, does the permittee have documentation that those activities are being performed?	X			(UNITED WATER CONTRACT)
B. Inspections				
Does the permittee inspect known SSO locations?	X			
How frequently are the known SSOs inspected? (e.g., each rain event, complaint, rain over .5 inch)	COMPLAINT / LIFT STATION ALARM			
How frequently are pump stations inspected?	DAILY / WEEKLY			
Does the permittee have documentation of SSO inspections?	X			
Does the permittee have documentation of the pump station inspections?	X			
Does the permittee have records of collapsed and/or blocked sewers?	X			
Does the permittee conduct CCTV inspections of the collection System?	X			
If so, how many miles of sewer lines are inspected with CCTV annually?	± 10 Miles			
How many equivalent full time staff are dedicated to inspections?	4			

If not, how are collection system equipment malfunctions or other deficiencies identified?

	YES	NO	N/A	Source*
Will the CCTV inspections eventually reach all major (i.e. non-lateral) lines in the system?	X			
C. Cleaning and Maintenance				
Does the permittee have a schedule for cleaning the sewer lines?	X			

How are cleaning frequencies for the sewer lines determined?

PRIORITIZED INITIALLY BY SYSTEM AGE & CONDITION AND THEREAFTER, ON A SCHEDULE OF YEARS BETWEEN CLEANINGS BASED ON CONDITION.

	YES	NO	N/A	Source*
Does the permittee have procedures for reducing solids deposition in the system?	X			
Does the permittee document sewer cleaning that has been performed?	X			
If so, does the documentation in any way differ from the permittee's schedule for cleaning?	X			(EMERGENCY CALLS)
Does the permittee exercise regulators according to a schedule?			X	
Are any regulators not functioning (e.g. rusted in place)?		X		

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

What is the procedure for documenting and correcting collection system deficiencies?
DEVELOPMENT OF WORKORDERS IN CMMS IN RESPONSE TO FIELD OBSERVATIONS & LINE TELEVISING.

How many complaints (re: basement backups, other discharges)) are received annually? PUBLIC SYSTEM MAINS & SERVICES - 60
PRIVATE SERVICES & MISC - 180
240

How are complaints addressed?
INITIAL RESPONSE TO DETERMINE IF PROBLEM IS A PUBLIC or PRIVATE ISSUE; ISSUE OF WORKORDER FOR PUBLIC PROBLEM CORRECTION AS APPROPRIATE.
NOTE: ASSISTANCE TO PRIVATE PROBLEMS PER PROTOCOL/SOP

	YES	NO	N/A	Source*
Is a computerized maintenance program used to track work orders? If so, is it used for:				
the WWTP?	X			
the pump stations	X			
the collection system, apart from the pump stations?	X			
Does the permittee have the following records?				
cleaning logs	X (WORK ORDERS)			
citizen complaints	X			
work orders	X			
video tape of CCTV inspections	X			
maps of problem areas	X			
emergency response plan	X			
training manuals	X (CALIFORNIA MANUALS)			
Does the permittee have a grease control program?	X			
Does the permittee have a root control program?		X		
Do the maintenance records indicate recurring problems which the program does not seem to be effective in reducing?		X		

If so, describe:

How many full time equivalent staff are dedicated to sewer cleaning and maintenance? LINE CLEANING CREW - 4
CONSTRUCTION CREW - 9
13

What spare parts for pump stations are kept in the inventory?
PUMPS
SEALS
IMPELLERS/WEAR RINGS
ELECTRICAL COMPONENTS

D. Operation of the Collection System

NOTE: INCLUDES CITY OF BRUNSWICK AREA & NORTH MIDLAND DRAINING TO ACADEMY CREEK WWTP

How many pump stations have a backup power supply? How many of these have:	7
dual feed?	N/A
on-site generator?	7
off-site portable generator	2
How many pump stations have backup pumping capacity if the largest pump goes down?	ALL
How many times has a pump failure (or inadequate pumping capacity) resulted in a SSO?	0 - (IN 2018)

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
How many pump stations have permanent flow meters?		0		
How many pump stations are monitored remotely?		78		
What is the annual operating budget for the collection system?		$ 3,700,000 (2010/11)		
How many miles are operated within the budget?		200 miles		

What type of training does the permittee provide to collection system personnel?

COLLECTION SYSTEM OPERATOR TRAINING FOR STATE LICENSING;
"IN-HOUSE" TRAINING FOR SPECIALITY TASKS (MANHOLE REHAB; CIPP TECHNIQUES);
PIPELINE ASSESSMENT CERTIFICATION (PACP) TRAINING.

Does the permittee have procedures for regulating diversion and bypass valves?			X	

If so, describe:

What flow rate can the WWTP receive before additional flow adversely affects the WWTP treatment process _____ MGD

Does the permittee do a pre-storm drawdown of the WWTP wet well and interceptors to add additional wet weather capacity?				

Which, if any, of the following does the permittee use for storage of untreated sewage?

abandoned pipelines				
catch basin storage tanks				
earthen basins				
first flush tanks				
in-receiving water flow balance				
in-sewer storage (e.g. raising weirs, regulator adjustment)				
lagoons				
open concrete retention tanks				
closed concrete retention tanks				
storage tunnels and conduits				

Which, if any, of the following does the permittee use to reduce storm water inflow:

area drain, foundation drains, and roof leader disconnection				
basement sump pump redirection				
flow restrictions and catch basin inlet modification				
grassed swales and infiltration trenches				
infiltration basins				
on-street surface storage				
porous pavements				
storm water detention basins				
storm water infiltration sumps				

Does the permittee have programs for reducing I/I ?	X (MASTER PLAN 2009)			
Does the permittee have a pretreatment program?	X			

What percentage of flow to the POTW is non-domestic? _____ %

Has the permittee identified industrial users whose discharge could reach SSOs?				
If so, does the permittee have documentation of this evaluation?				

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
Has the permittee modified its pretreatment program to reduce IU discharge to SSOs?				
If so, do the modifications				
prohibit batch discharges during wet weather?				
require detention of industrial discharge during wet weather?				
other:				
Does the permittee have a process for periodic review of the pretreatment program?				
Is the maximum wet-weather WWTP capacity reached during wet weather events?				
If a bypass is used, does the permittee monitor bypass flow rates?				
Are other treatment units available for use during a storm event?				
Has the permittee determined the hydraulic capacity of each pump station?		X (PARTIAL)		
Has the permittee determined the hydraulic capacity of each influent sewer?		X (TRANSMISSION MAINS)		
Is pump station capacity smaller than interceptor capacity in any portions of the system?	X			

What other bottlenecks, if any, has the permittee identified in the collection system?

NONE

Has the permittee upgraded any pump stations to increase capacity? X

Has the permittee identified any process limitations at the WWTP? If so, what are they?

How does the permittee become aware of SSOs?

CUSTOMER COMPLAINTS OR FIELD OBSERVATION DURING MAJOR WET WEATHER EVENTS; REMOTE MONITORING OF LIFT STATIONS.

What are the most common causes of SSOs?

MAJOR WET WEATHER EVENTS

NOTE: SEE SEPT 2009 WASTEWATER SPILL REPORT (ATTACHED) – NO INCIDENTS IN 2010.

What steps has the permittee taken to prevent SSOs at problem locations?

2009 MASTER PLAN OF REHABILITATION PROJECTS.,

SSES OF LIFT STATION BASINS SHOWING HIGH PERCENTAGE OF FLOW DURING RAIN EVENTS.

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

	YES	NO	N/A	Source*
Does the permittee document SSOs? Does the documentation include:	X			
date and time of overflow	X			
volume of overflow	X			
SSO Location	X			
cause of overflow	X			
corrective action taken	X			
Ultimate destination of overflow	X			
Does the permittee's documentation reports SSOs to the permitting authority?	X			
Which, if any, of the following methods does the permittee use to monitor the frequency and duration of SSO discharges?				
installed sensors and telemetry				
visual survey during scheduled inspections				
visual survey during wet weather				
citizen complaints	X			
	X			
Which, if any, of the following methods does the permittee use to measure the impacts of SSOs on receiving streams?				
visual survey of receiving stream when SSOs are active	X			
biosurveys				
water quality sampling:	X			
BOD/CBOD	X			
total suspended solids	X			
dissolved oxygen	X			
fecal coliform	X			
E. coli				
enterrococci				
ATTACHMENTS				
List of pump stations?	X			
List of SSOs?			X	(2010)

Inspector: GARY REYNOLDS, EPD, COS; TIM MATACK, GLEN HENDERSON, JWSC COLLECTIONS

Inspection Date: 12/9/10

SSO INSPECTION SUMMARY: RAY TARKER, FIELD OPERATIONS MANAGER, HAS COLLECTION SYSTEM CREWS INCLUDING TIM MATACK AND GLEN HENDERSON. A GIS MAPS ALL MANHOLES, LIFT STATIONS, AND SCOURLINES, AND INCLUDES THOSE SCHEDULED FOR UPGRADE.
AERIAL SEWER CROSSINGS ARE WELL PROTECTED, WITH NO LIVE STREAM THREATENING IMPACT. THE PIPES ARE SUPPORTED BY CEMENT SADDLES.
WORK ORDERS TRACK COMPLAINTS, SUCH AS LATERAL BACK-UP, AS WELL AS RESOLUTION TO THE COMPLAINTS.
DETAILED SPARE PARTS INVENTORY ARE MAINTAINED IN WRITEN LOGS AS WELL AS ELECTRONICALLY.
SECTIONS ARE SCHEDULED FOR TELEVISING, CLEANING AND REHABILITATION.

* (P) Permit; (A) Application for permit; (R) Reports submitted; (I) Interview of facility representative; (D) Direct observation; (O) Other

From: Ray Tarker <RTarker@bgjwsc.org>
To: Gary Reynolds <Gary.Reynolds@dnr.state.ga.us>
Date: 12/9/2010 2:28 pm
Subject: Additional Information

CC: Tim Matutat <TMatutat@bgjwsc.org>

Gary;

During the Wastewater Collection System Inspection interview process you requested additional information as follows:

1. Current Ordinance regarding Satellite Collection Systems; (excerpt from City of Brunswick and Glynn County Water & Sewer Ordinances adopted in 2010 is attached).
2. Number of Public Manholes in Academy Creek WWTP drainage basin: (from our GIS mapping there are approximately 3,610 public manholes in this drainage basin).

Ray Tarker

Brunswick – Glynn JWSC
Systems Pumping & Maintenance Division

Memorandum

To: Gary Reynolds, EPD
Fm: Ray Tarker, Superintendent
Re: Wastewater Collection System Inspection
Dt: November 23, 2010

Please accept the enclosed as a preliminary checklist for the December 2010 inspection. As we work through this checklist during our inspection we may find areas where additional information or explanations should be provided.

If possible we would like to schedule your inspection for the second week in December.

Thank you.

NOTE: WET WEATHER SSO REPORT - 2009
(NONE in 2010)

September 11, 2009

Department of Natural Resources
Environmental Protection Division – Coastal District
400 Commerce Center Drive
Brunswick, GA 31523-8251
(Attn: Gary Reynolds)

Re: September 1 – 2, 2009 Wastewater Spill Incidents

Dear Sir:

Please accept the following as our formal report of these SSO incidents.

Location: The Brunswick-Glynn Joint Water & Sewer Commission, as agent for the City of Brunswick, Georgia NPDES Permit GA0025313, in accordance with aforesaid permit and DNR Regulation 391-3-6-.05 Emergency Actions, hereby makes Formal Notification of wastewater spills that occurred on Tuesday, September 1st and continued into Wednesday, September 2nd 2009.

The documented SSO locations were as follows:

1. The Fairway Oaks Subdivision generally bordered by Altama Avenue, Chapel Crossing Road and Darien Highway (Hwy 17).
2. Wastewater Lift Station 4048 @ 3893 Darien Highway approximately .25 miles southwest of Belle Point Subdivision.
3. 2905 Glynn Avenue (Hwy 17), Larry's Sub Shop parking lot.
4. 4603 Altama Avenue near the intersection of Community Road.

Cause: These wastewater discharges were the result of a 50-year recurrence event storm that produced approximately 9 inches of rain in the central northeastern section of Glynn County. The area of the most intense rainfall, as measured by local digital tipping-bucket rain gauges owned and operated by the JWSC, was bounded by the Black River to the East, the Glynco Jetport to the North, First Street in Brunswick to the South and Golden Isles Parkway to the West. Surrounding areas, to include St. Simons Island, received between 2 inches and 4 inches. The maximum inflow measured at the Academy Creek WWTP during this event was 26 MGD (highest instantaneous flow). This amount was similar in scale to the Tropical Storm Tammy event of October 2005 and is indicative of the maximum capacity deliverable to this WWTP from the collection and transmission systems draining to this plant. There were no overflows at the WWTP. Documented SSO's occurred in specific areas where older collection systems, with high rates in inflow and infiltration, overload pumping facilities that in turn back-up sewer mains causing SSO's at the upper reaches of the system.

Estimation of Discharge and Spill Determination:

1. Fairway Oaks Subdivision – one sanitary sewer manhole was observed as an overflow in this area; however, the entire area was flooded and numerous manholes were covered by 6 inches to 2 feet of water. This manhole is the furthermost manhole on the gravity sewer system that drains to wastewater lift station 4013 that is within the subdivision. This lift station remained in full service and at full capacity during the entire event and at one point within the flooded area. The overflowing manhole observed was estimated to have **discharged <10,000 gallons** based on an estimated discharge rate of 2 gpm and overflowed from approximately 0830 hours until 1900 hours on September 2nd. (13.5 hours or 810 minutes * 2 gpm = **1,620 gallons**). Since the entire area was flooded and any wastewater discharged would have mixed with the flood waters and eventually found its way to drainage to State Waters, we are classifying this as a **Minor Spill**.

2. Wastewater Lift Station 4048 – this lift station wet well was initially observed overflowing at this location at 1930 hours on 9/1 and continued overflowing until 9/2 at 2000 hours, or approximately 23.5 hours. This lift station remained in service and at full capacity throughout the event. The rate of overflow was estimated at an average rate of 3 gpm during this time frame. At the estimated 3 gpm for 23.5 hours or 1,410 minutes, this overflow is estimated to have discharged approximately **4,230 gallons** to the environment and has been determined to be a **Minor Spill < 10,000 gallons**. This wastewater discharge flowed from the station to a roadside drainage ditch. The drainage ditch discharged to a major culvert that crosses Darien Highway and then into a large marsh area that eventually drains to the Black River. The initial investigation of this spill was performed during high tide and the amount of the spill was exaggerated by this influence. Sampling begun on September 3rd in this area indicated an initially high fecal count of 4,600 mg/L upstream of the spill due to the pooling caused by the high tides and ditch flooding, but a fecal count of 527 mg/L at the discharge into the marsh. Subsequent samplings through Monday, September 7th show fecal counts less than 1,000 mg/L, which are typical background levels normally experienced in such drainage channels in this area.

3. 2905 Glynn Avenue – one sanitary sewer manhole was overflowing in this area. This manhole is the furthermost upstream manhole in the gravity system serviced by wastewater lift station 4017 on Parkwood Avenue. This lift station remained in service and at full capacity throughout the event. This lift station's gravity sewer basin was significantly flooded during this event and numerous manholes were covered with storm water and unobservable during the event. The overflowing manhole observed was estimated to have **discharged <10,000 gallons** based on an estimated discharge rate of 2 gpm and overflowed from approximately 1200 hours until 2000 hours on September 2nd. (8 hours or 480 minutes * 2 gpm = **960 gallons**). Since the entire area was flooded and any wastewater discharged would have mixed with the flood waters and eventually

found its way to drainage to State Waters, we are classifying this as a **Minor Spill**.

4. 4603 Altama Avenue – two adjacent sanitary sewer manholes were observed overflowing in this area. These two manholes are at the furthermost upstream section of gravity sewer draining to wastewater lift station 4006 at the Community College. This lift station remained in service and at full capacity throughout the event. These overflowing manholes are directly downstream of wastewater lift station 4021 which, as a re-pump facility, discharges to this gravity system. Flooding in this upstream lift station drainage basin and the unusually high rate of discharge overloaded the gravity sewer mains causing the overflow at these shallow manhole locations. These manholes were documented as overflowing at 1130 hours until approximately 2100 hours on September 2nd (9.5 hours or 570 minutes) at a average rate of 2 gpm each (4 gpm). The estimated wastewater discharge to the environment is therefore estimated at **2,280 gallons** (<10,000 gallons) and classified as a **Minor Spill**.

Corrective Actions Taken: All overflow sites were initially marked with traffic cones and/or barricades. By Wednesday evening all overflow sites were posted with signs warning of wastewater spill contamination and Public Announcements were made on local radio stations advising of the spills. A formal notification in the Brunswick News was not able to be published until Monday, September 7th due to editorial conflicts. Published text for these announcements is attached for reference. On Wednesday, September 3rd and Thursday, September 4th all overflow sites were subjected to clean-up by JWSC Combination Cleaners (VacCon Trucks) and disinfection using hand applied granular chlorine.

The storm water inflow caused by this 50-year recurrence storm was clearly beyond the design capacity of wastewater affected pumping facilities. The JWSC is in the midst of completing a Master Plan that addresses inflow and infiltration issues. Areas indicating the need for rehabilitation to curtail these problems are being prioritized and scheduled for funding. Efforts in this direction are anticipated to begin within a year, with an emphasis on the gravity system on FLETC, which appears to be the primary contributor to the overflow problems at lift station 4048.

Respectfully Submitted,

R.E. Tarker, Jr.
Superintendent
Systems Pumping & Maintenance Division

attachments

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EPA

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Major/Minor: ____

NPDES/LAS: ____

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N	3 GA0025313 11	12 10/12/09 17	18 C	19 S	20 1

Remarks: 21 ____ 66

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	BI	QA	Reserved
67 2 69	70 S	71 N	72 N	73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*
CITY OF BRUNSWICK WPCP
HWY 341, GLYNN COUNTY

Entry Time/Date: 8:30 am / 12/9/10
Permit Effective Date: 8/6/07
Exit Time/Date: 3:00 p.m. / 12/9/10
Permit Expiration Date: 8/15/12

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
MARK RYALS, CLASS I WQ SUPERINTENDENT
CITY OF BRUNSWICK (GWSC)
(912) 261-7150
FAX: (912) 261-7172

Other Facility Data *(e.g., SIC NAICS, and other descriptive information)*
River Basin: SATILLA
County: GLYNN
Sensitive Area Y/N: N

Name, Address of Responsible Official/Title/Phone and Fax Number
KEITH P. MORGAN, EXECUTIVE DIRECTOR, JWSC
(912) 261-7112
FAX: (912) 261-7178

Contacted ☐ Yes ☐ No

Section C: Areas Evaluated During Inspection *(Check only those areas evaluated)*

✓ Permit	✓ Self-Monitoring Program	☐ Pretreatment	☐ MS4
✓ Records/Reports	☐ Compliance Schedules	✓ Pollution Prevention	
✓ Facility Site Review	✓ Laboratory	✓ Storm Water	
✓ Effluent/Receiving Waters	✓ Operations & Maintenance	✓ Combined Sewer Overflow	
✓ Flow Measurement	✓ Sludge Handling/Disposal	✓ Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes	SEV Description
☐☐☐☐☐	NO SEV CODE VIOLATIONS DETERMINED
☐☐☐☐☐	
☐☐☐☐☐	
☐☐☐☐☐	

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
GARY W. REYNOLDS Gary W. Reynolds	EPD, CO SOUTH (CF) 912-264-7284 912-262-3160	12/21/10

Signature of Management Q A Reviewer	Agency/Office/Phone and Fax Numbers	Date
	" " "	12/22/10

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ICIS entry MUNICIPAL INSPECTION FORM

Permit Number: GA0025313 **Date:** 12/17 & 9/2010

Inspection Type: & **Inspector:** S **Facility Type:** 1

The Inspection Type Code: (Use one of the codes listed below)

- # Combined Sewer Overflow-Sampling
- $ Combined Sewer Overflow-Non-Sampling
- + SSO - Sampling
- (&) Sanitary Sewer Overflow-NON Sampling
- @ Follow-up (Enforcement)
- A Performance Audit
- B Compliance Biomonitoring
- C Compliance Evaluation (non-sampling)
- J Complaints
- O Compliance Evaluation (Oversight)
- R Reconnaissance
- S Compliance Sampling
- Z Sludge - Biosolids

Inspector type codes: (Use one of the codes listed below)

- S- State Inspector
- J- Joint EPA/State inspectors EPA LEAD
- T- Joint State/EPA Insp (STATE Lead)

Facility Type Codes:

1. Municipal. Publicly Owned Treatment Works with 1987 Standard Industrial Code (SIC) 4952

SEV Codes:	SEV Description & DATE	X NO SEV CODE VIOLATIONS

Facility Location Address:
CITY OF BRUNSWICK
2909 NEWCASTLE STREET
Address 1

BRUNSWICK GA. 31520
City, State & Zip

Instructions:
Enter the Permit number (all 9 digits including letters and numbers). Print legibly & be sure to to fill in all vacant fields. This form must have a signature and Inspector's Regional Office Location information in the event that any information need's to be clarified. As long as the document is signed it may be scanned or faxed to Angela Westin.

Name(s) and Signatures(s) of Inspector(s)
GARY W. REYNOLDS
Gary W. Reynolds
912-264-7284
EPD/CD SOUTH / 912-262-3160 (FAX)
Agency/Office/Phone & Fax Numbers

12.16.10
Submission Date

Angela Westin
Data and Assessment Management Unit
Program Manager I
Watershed Protection Branch
Watershed Planning and Monitoring Prog
Phone (404) 675-1618
Fax (404) 675-6246
Angela.Westin@dnr.state.ga.us

FILE COPY

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GARY W. REYNOLDS
Gary W. Reynolds
912-264-7284
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Agency/Office/Phone & Fax Numbers

12.16.10
Submission Date

Angela Westin
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